

Application No.: 09/341,225

60680-1281

AMENDMENTS TO THE CLAIMS

1-28. Cancelled.

29. (Previously Presented) A method of manufacturing a heat shield suitable for use in motor vehicles comprising the steps of:

providing first and second plates, each said plate having an edge region and being at least partially plastically deformable;

providing an insulating material onto said first plate to cover at least a portion of said first plate;

compacting at least a portion of said insulating material; and

connecting said edge region of said first plate to said edge region of said second plate such that said insulating material is positioned between said first and second plate, wherein said insulating material is selected from the group consisting of mica, expanded graphite, perlite, and a mica decomposition.

30. (Original) A method as recited in claim 29, wherein the form of said insulating material is selected from the group consisting of powder and flakes.

31. (Previously Presented) A method as recited in claim 29, wherein said first and second plates are connected at said edge regions by a connection selected from at least one of the group consisting of a positive connection and a non-positive connection.

32. (Cancelled)

33. (Original) A method as recited in claim 29, wherein said insulating material includes a filler.

34. (Original) A method as recited in claim 29, wherein said compacting of said insulating material is achieved by movement of said second plate towards said first plate.

35. (Original) A method as recited in claim 29, wherein said compacting of said insulating material is carried out by a pressing tool in at least one pressing movement.

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36. (Previously Presented) A method as recited in claim 29, including the steps of applying additional insulating material onto at least regions of said first plate and the previously compacted insulating material and compacting said additional insulating material.
37. (Previously Presented) A method as recited in claim 29, further comprising removing said insulating material that is not compacted.
38. (Original) A method as recited in claim 29, wherein said insulating material is applied substantially evenly on said first plate.
39. (Original) A method as recited in claim 29, wherein said insulating material is provided on said first plate in the shape of a cone; and wherein said compacting of said insulating material distributes said insulating material on said first plate.
40. (Original) A method as recited in claim 29, wherein said first plate is partially deformed prior to providing said insulating material.
41. (Original) A method as recited in claim 40, wherein said first plate is at least partially deformed in the shape of a trough.
42. (Previously Presented) A method as recited in claim 29, wherein an inorganic binding material is applied to said first plate prior to providing said insulating material.
43. (Original) A method as recited in claim 29, wherein at least one of said plates includes a surface formation to facilitate the distribution of said insulating material upon compaction.
44. (Original) A method as recited in claim 29, wherein said second plate is at least partially flanged to said edge of said first plate.
45. (Original) A method as recited in claim 29, wherein the compacting of said insulating material is controlled so that the space between said first and second plates that is not used to physically connect said plates is completely covered with insulating material.

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46. (Original) A method as recited in claim 29, wherein the heat shield is three-dimensionally deformed after said first and second plates are connected.
47. (Original) A method as recited in claim 29, wherein at least a portion of said first plate is electrostatically charged prior to the application of said insulating material and said insulating material applied to the non-charged portion of said first plate is removed prior to compaction.
48. (Original) A method as recited in claim 29, including the step of removing a portion of said insulating material from said first plate with a tool that is electrostatically charged in certain regions.
49. (Presently Amended) A heat shield suitable for use in motor vehicles comprising:
a first plate that is at least partially plastically deformable;
a second plate that is at least partially plastically deformable; and
an insulating material that is compacted;
wherein said first plate is connected to said second plate and said insulating material is positioned between said first plate and said second plate and is selected from the group consisting of mica, expanded graphite, perlite, and a mica decomposition, and wherein at least one of said first and second plates has a surface with increased roughness as compared to a corresponding surface of said other plate.
50. (Cancelled)
51. (Original) A heat shield as recited in claim 49, wherein said insulating material is in a form selected from the group consisting of powder and flakes.
52. (Original) A heat shield as recited in claim 49, wherein at least one of said first and second plates is comprised of metal.
53. (Original) A heat shield as recited in claim 49, wherein at least one of said first and second plates includes a surface deformation.

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54. (Original) A heat shield as recited in claim 53, wherein said surface deformation includes a deformation selected from the group consisting of bulges, beads, or webs.

55. (Cancelled)

56. (Original) A heat shield as recited in claim 49, wherein at least one of said first and second plates includes a surface that is coated with a material that reflects radiated heat.

57. (Cancelled)

58. (Original) A heat shield as in recited in claim 49, wherein the thickness of said insulating material positioned between said first and second plate is varied at different locations between said first and second plate.

59. (Original) A heat shield as recited in claim 49, wherein predetermined portions of the heat shield are kept free of said insulating material.

60. (Previously Presented) A method for manufacturing a heat shield to be used in motor vehicles, comprising:

providing at least first and second external plates;

applying an insulating material to one of said first and second external plates so as to at least partially cover said one external plate, said applied insulating material being one of a granular, powder and flake form and free of binding agent;

compacting said insulating material into a predetermined contour;

positioning said other of said first and second external plates adjacent to said insulating material such that said insulating material is positioned between said first and second external plates; and

connecting said first and second external plates together to capture said insulating material therebetween.

61. (Previously Presented) A method as recited in claim 60, wherein said compacting step takes place before said connecting step.

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62. (Previously Presented) A method as recited in claim 60, wherein said insulating material is selected from the group consisting of mica, expanded, graphite, perlite, and a mica decomposition.

63. (New) A heat shield suitable for use in motor vehicles comprising:
a first plate that is at least partially plastically deformable;
a second plate that is at least partially plastically deformable; and
an insulating material that is compacted;

wherein said first plate is connected to said second plate and said insulating material is positioned between said first plate and said second plate and is selected from the group consisting of mica, expanded graphite, perlite, and a mica decomposition, and wherein at least one of said first and second plates includes a surface that is coated with a material that reflects radiated heat, and wherein the plate positioned on the side of the heat shield that is remote from the radiated heat includes a modification selected from the group of modifications consisting of (a) increased thickness, (b) the inclusion of one or more ribs, and (c) the inclusion of a material having good heat-conducting capacity.